Cover Page
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048 Part 1 Issued: 08/01/08

Application for Certification

Model Year: 2009

Durability Group: 9BMXDPDNNV30

Evaporative Family: n.a.

Test Group: 9BMXT03.0M57

Summary Sheet No: 120T2-20

Durability Group Description: Four Stroke,

Diesel Cycle,

Direct Fuel Injection, Catalyst Code 6Lh,

Ceramic Monolith Pt/Pd Oxidation-Catalyst,

Diesel Particulate Filter, Exhaust Gas Recirculation, Selective Catalytic Reduction

Test Group Description: 3.0 Liter, In-Line 6 Cylinder, LDT 4

VID

Applicable Standards: CARB : MDV-3, LEV II

EPA: Tier 2 Bin 5

Carlines Covered: X5 xDrive35d

Vehicles Tested:

Jaminos Governous Alexandres

Exhaust: LJ95006 00 FTP 75 9BMX10000062 00 HWY 9BMX10000063 00 US06 9BMX10000065 00 SC03 9BMX10000064

Config.

Test

TN

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Section	Contents	Reference, Applicability
1	Correspondence and Communications	
2	Durability Group Description	
3	Evaporative/Refueling Family Description	n.a.
4	Durability Procedure Description	
5	Test Group Description	
6	Test Vehicle Description	
7	Test Results	
8	Emission testing waiver statement	Refer to Common Section, Section 8
9	OBD System Description	Refer to Common Section, Section 16
10	Description of Alternate-fueled Vehicles	not applicable
11	AECD descriptions	
12	Description of vehicles covered by certificate and test parameters	
13	Projected Sales	Refer to Common Section, Section 16
14	Request for Certification	
15	Other information	
16	Confidential information	
17	California ARB Information	
	Part 2	
	Notification of running change	



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Table of Changes

Revision No.	Revision Date	Part	Section	Page	Description of Change
01	04/10/10	2			Part 2 added Notification of running changes added



Section 1 Page 1 of 1

048 Part 1 Issued: 08/01/08

1. Correspondence and Communications

1.1. Authorized Persons Refer to Common Section, Section 1, Item 1.1

1.2. Certificate Information Refer to Common Section, Section 1, Item 1.2

1.3. Primary certification contact:

Name: Thomas Hofmann Phone Number: 201 / 571 - 5195

Fax Number: 201 / 571 - 5479

E-Mail-Address: Thomas.Hofmann@bmwna.com



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048 Part 1 Issued: 08/01/08

2. Durability Group Description

2.1.	Durability Group Name	9BMXDPDNNV30
2.2.	Combustion Cycle	four stroke, Diesel cycle
2.3.	Engine Type	piston, water cooled
2.4.	Fuel used	Diesel
2.5.	Basic fuel metering system	direct fuel injection
2.6.	Catalyst construction	ceramic monolith, unheated
2.7.	Precious Metals in Catalyst	Paladium, Pd Platinum, Pt
2.8.	Precious Metals in particulate filter	Paladium, Pd Platinum, Pt
2.9.	Range of Catalyst Grouping Statistics:	4.1

9BMXT03.0M57

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4. Durability Procedure Description

- 4.1. Description of used durability process
- 4.1.1. Durability Program for Exhaust Emissions:

The durability data vehicle was aged according to the aging process described in § 86.1823-08.

Statement:

Based on BMW's good engineering judgment, all the vehicles described in this Application for Certification comply with all applicable intermediate and full useful life standards.

Following deterioration factors were determined after the aging process.

	NOx	CO	NMHC	PM
50k	1,043	1,073	1,103	0,947
120K	1,110	1,183	1,260	0,866
UAF	0,002	0,000	0,000	0,000
DAF	-0,122	0,010	0,003	-0,002

4.1.2. Durability Program for n.a. Evaporative/Refueling Emissions:

- 4.2. Determination of certification levels
- 4.2.1. Exhaust Emissions: Multiplicative Deterioration Factor;

For Deterioration Factors refer to Summary Sheet enclosed in Chapter 7 of this application

4.2.2. Evaporative/Refueling Emissions: ORVR Testing Waiver per CFR § 86.1810-01 (k) + (m)

Due to the low vapor pressure of diesel fuel and the vehicle tank temperatures, hydrocarbon vapor concentrations are low and the vehicle meets the 0.20 grams/gallon refueling emission standard

without a control system.



Section 5 Page 1 of 1

5. Test Group Description

5.1.	Test Group Name	9BMXT03.0M57
5.2.	Summary sheet number:	120T2-20
5.3.	Engine displacement	2993 cm ³ = 182.6 in ³
5.4.	Arrangement and number of cylinders	S:
5.4.1.	Arrangement of cylinders:	In-Line
5.4.2.	Number of cylinders:	6
5.5.	Emission standards	
5.5.1.	Vehicle class covered	EPA: LDT 4; CARB: MDV-3
5.5.2.	Participation in NLEV	Not Applicable
5.5.3.	Emission standards class	CARB: LEV II
		EPA: Tier 2 - Bin 5
5.5.4.	Applicable emission standards	Refer to Summary Sheet, according to item 5.2, enclosed in Section 7 of this application



Section

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6. Test vehicle description

Line No	Test vehicle number	Config.	Engine displ. [cm³]	Emission control system	Engine code	Transmission	ETW (lbs)	Axle ratio	Remark
1	L012382	00	2993	DI, 2TC, CAC, EGR, SCR, DPF, OC, 2NOS, AFS	3.0-A-M57-E70	Semi-Automatic Six Speed	5500	3.64	DDV
2	LJ95006	00	2993	DI, 2TC, CAC, EGR, SCR, DPF, OC, 2NOS, AFS	3.0-A-M57-E70	Semi-Automatic Six Speed	5500	3.64	EDV, FEDV
3	LJ95038	00	2993	DI, 2TC, CAC, EGR, SCR, DPF, OC, 2NOS, AFS	3.0-A-M57-E70	Semi-Automatic Six Speed	5500	3.64	FEDV w/o Active Roll Stabilization

For complete vehicle description, refer to Vehicle Information submitted to Certification and Fuel Economy Information System (CFEIS) or to Summary Sheet enclosed in Section 7 of this Application

Selection of vehicles carried out according to 40 CFR § 86.1828-01(a).



Section

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048 Part 1 Issued: 08/01/08

7. Test results (Cover page)

For requested information refer to attached Summary Sheet submitted to Certification and Fuel Economy Information System (CFEIS):

Enclosure Number	Summary Sheet Index Number	Date
1	120T2-20	08/01/08

Date: 01-AUG-08 Time: 05:28:36 AM



048

Application for Certification **9BMXT03.0M57**

Part 1

Section

Issued: 08/01/08

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Page

Summary Sheet Version Number: 0 Vehicle Manufacturer: 120 BMW Summary Sheet Index Number: 120T2-20 Engine Manufacturer: BMX BMW

Model Year: 2009 Issue Date: 00-00-00 Revised Date:

Summary Sheet Sales Area: CA CALIFORNIA

FA FEDERAL ALL ALTITUDE

Comments:

Durability Group Specification

Durability Group: 9BMXDPDNNV30 Ignition Type: COMPRESSION Combustion Cycle: DIESEL CYCLE Fuel Combination: SINGLE FUEL Basic Fuel Metering System: DIRECT FUEL INJECTION Primary Fuel: DIESEL

Trap: ACTIVE REGENERATION Second Fuel: N/A Catalyst Construction: UNHEATED MONOLITH CATALYST Third Fuel: N/A

Catalyst Precious Metal Combination: PLATINUM AND PALLADIUM OXIDATION CATALY

Test Group Specification

Test Group: 9BMXT03.0M57 Valves per Cylinder: 4

Federal OBD: CALIFORNIA OBD Projected Job 1 Date: 01-OCT-08
California OBD: CARB OBD II Number of Subsystems: 2

California OBD: CARB OBD II Number of Subsystems:
Displacement: 3.0 L Alternate Displacements:

Displacement: 3.0 L Alternate Displacements: Compliance Program: TIER 2

Comments:

* These Vehicles were certified to SFTP (Supplemental Federal Test Procedure) Standards.

* This summary sheet supports a conditional certificate which is subject to conditions and provisions of 40 CFR 86.1835(d).

Date: 01-AUG-08 CERTIFICATION AND FUEL ECONOMY INFORMATION SYSTEM (CFEIS)
Time: 05:28:36 AM SUMMARY SHEET

DATABASE REPORT

EMISSION DATA VEHICLES

Model Year: 2009 Vehicle Manufacturer: 120 BMW Summary Sheet Version Number: 0 Engine Manufacturer: BMX BMW

Summary Sheet Index Number: 120T2-20 Certificate Number:

Test Group: 9BMXT03.0M57 Vehicle Sales Area: CA CALIFORNIA

Engine System: 1 FA FEDERAL ALL ALTITUDE

Evaporative/Refueling Family:
Evaporative System:

Vehicle ID: LJ95006 Transmission: 26 L6



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048 Part 1 Issued: 08/01/08

Vehicle Configuration: 0 Engine Code: 3.0-A-M57-E70 Carline Name: X5 XDRIVE35D Axle Ratio: 3.64 Fuel: CERT DIESEL (8 - 15 PPM SULFUR) N/V Ratio: 3.0 Displacement: 2993.0 CC Compression Ratio: 16.5 Rated HP: High Altitude: Test Weight: Test Procedure Code: 2 CVS 75 AND LATER (W/O CAN. LOAD) 5500 Test Number: Running Change: 1088943 Fuel System: DIRECT FUEL INJECTION Test Sales Area: CALIFORNIA OXYGEN CATALYST ONLY Catalyst: Turbo/Supercharger: TURBOCHARGER Dynamometer Power A Dynamometer Target Coefficients: a = 59.3 b = .33c = .02413Dynamometer Set Coefficients: a = 26.5 b = -.048 c = .02677Aged Emission Components: N/A Exhaust Emission Related Components: 16 OXIDATION CATALYST 35 OTHER ACTIVATED EGR 50 TURBOCHARGER ELECTRONIC CONTROLS-DIGITAL 62 99 OTHER Exhaust Emission Result RAF Additive DF Multiplicative DF Certification Level Emission Standard Tier Useful Life Emissions _____ _____ 0 1.183 .13 0 1.073 .12 0 1.26 .020 0 1.103 .018 0 1.11 .032 0 1.043 .030 0 1 .001 .114 .114 120,000 CO 50,000 CO 3.40 .114 .0159 .0159 .0286 .0286 L2 120,000 HC-NM 0.090 L2 0.075 50,000 HC-NM L2 120,000 NOX 0.070 L2 50,000 NOX 0.050 L2 .0007 120,000 PM 0.010 L_2 ______ * SFTP(Supplemental Federal Test Procedure) test numbers for the composite HC-NM+NOx and CO(optional) certificate levels:

CERTIFICATION AND FUEL ECONOMY INFORMATION SYSTEM (CFEIS) Date: 01-AUG-08

Time: 05:28:36 AM

SUMMARY SHEET DATABASE REPORT

EMISSION DATA VEHICLES

Vehicle Manufacturer: 120 BMW Engine Manufacturer: BMX BMW

Summary Sheet Index Number: 120T2-20 Certificate Number:

Test Group: 9BMXT03.0M57 Vehicle Sales Area: CA CALIFORNIA FA FEDERAL ALL ALTITUDE

Engine System:

Summary Sheet Version Number: 0

Evaporative/Refueling Family:

Evaporative System:

Vehicle ID: LJ95006 Transmission: 26 L6 Engine Code: Vehicle Configuration: 0 3.0-A-M57-E70

Carline Name: X5 XDRIVE35D Axle Ratio: 3.64

CERT DIESEL (8 - 15 PPM SULFUR) 2993.0 CC Fuel: N/V Ratio: 3.0 Displacement: Compression Ratio: 16.5

Rated HP: High Altitude: 265 5500

Test Weight: Test Procedure Code: 2 CVS 75 AND LATER (W/O CAN. LOAD) 1088943

Test Number: Running Change:



9BMXT03.0M57

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Fuel System: DIRECT FUEL INJECTION Test Sales Area: CALIFORNIA Turbo/Supercharger: TURBOCHARGER

Catalyst: OXYGEN CATALYST ONLY Dynamometer Power A

Dynamometer Target Coefficients: a = 59.3 b = .33c = .02413b = -.048Dynamometer Set Coefficients: a = 26.5 c = .02677

Aged Emission Components: N/A

Exhaust Emission Related Components: 16 35 OXIDATION CATALYST OTHER ACTIVATED EGR

TURBOCHARGER 50 62 ELECTRONIC CONTROLS-DIGITAL

OTHER

1088946 (US06), 1088945 (SC03).

CERTIFICATION AND FUEL ECONOMY INFORMATION SYSTEM (CFEIS) Date: 01-AUG-08 Time: 05:28:36 AM SUMMARY SHEET DATABASE REPORT

EMISSION DATA VEHICLES

Model Year: 2009 Vehicle Manufacturer: 120 BMW Summary Sheet Version Number: Engine Manufacturer: BMX BMW

Summary Sheet Index Number: 120T2-20 Certificate Number:

9BMXT03.0M57 Vehicle Sales Area: Test Group: CA CALIFORNIA Engine System: FA FEDERAL ALL ALTITUDE

Evaporative/Refueling Family:

Evaporative System:

Transmission: 26 L6
Engine Code: 3.0-A-M57-E70
Axle Ratio: 3.64 Vehicle ID: LJ95006 Vehicle Configuration: 0

Carline Name: X5 XDRIVE35D
Fuel: CERT DIESEL (8 - 15 PPM SULFUR)
Displacement: 2993.0 CC
Rated HP: 265 N/V Ratio: 3.0 Compression Ratio: 16.5

High Altitude:

Test Weight: Test Procedure Code: 3 HWFE (HIGHWAY TEST) 5500 Test Number: Running Change: 1088944

Fuel System: DIRECT FUEL INJECTION Test Sales Area: CALIFORNIA Catalyst: OXYGEN CATALYST ONLY Turbo/Supercharger: TURBOCHARGER

Dynamometer Power A

c = .02413 b = -.048Dynamometer Target Coefficients: a = 59.3 b = .33 Dynamometer Set Coefficients: a = 26.5 Aged Emission Components: N/A

Exhaust Emission Related Components: 16 OXIDATION CATALYST 35 OTHER ACTIVATED EGR

50 TURBOCHARGER ELECTRONIC CONTROLS-DIGITAL



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048 Part 1 Issued: 08/01/08

048					Part 1				
		99	OTHER						
				haust Emi					
Useful Life Emissions	Result	RAF	Additive DF	Multiplic	ative DF	Certification	on Level Emission	n Standard	Tier
120,000 NOX-HWY 50,000 NOX-HWY	.0016 .0016		0 0	1	1.11 .043	.002		0.090 0.070	L2 L2
Date: 01-AUG-08 Time: 05:28:36 AM	CER	TIFICATI		CONOMY INFOUMMARY SHE	ET	SYSTEM (CFEIS	3)		
Model Year: Summary Sheet Version I Summary Sheet Index Nu Test Group: Engine System: Evaporative/Refueling Evaporative System:	9BMX 1	2-20	MISSION DATA V Vehicle Man Engine Manu Certificate Vehicle Sal	ufacturer: facturer: Number:	CA CA	BMW BMW LIFORNIA ERAL ALL ALTI	ITUDE		
Vehicle ID: Vehicle Configuration: Carline Name: Fuel: Displacement: Rated HP: Test Weight: Running Change: Fuel System: Catalyst: Dynamometer Power A	LJ95006 0 X5 XDRIVE35D CERT DIESEL (8 2993.0 CC 265 5500 DIRECT FUEL IN OXYGEN CATALYS	- 15 PP JECTION T ONLY	PM SULFUR)		High Alti Test Proc Test Numb Test Sale Turbo/Sup	tude: edure Code: er: s Area: ercharger:	26 L6 3.0-A-M57-E70 3.64 30 16.5 90 US06 1088946 CALIFORNIA TURBOCHARGER		
Dynamometer Target Coe Dynamometer Set Coeffic Aged Emission Componen	fficients: a = cients: a = ts:	59.3 26.5 N/A	b = .33 b =0	48	C = .0241 C = .0267	3 7			
Exhaust Emission Relate	ed Components:	16 50 99	OXIDATION CAT TURBOCHARGER OTHER	ALYST			ER ACTIVATED EGR CTRONIC CONTROLS	-DIGITAL	
				haust Emi	ssion				
Useful Life Emissions	Result	RAF	Additive DF	Multiplic	ative DF	Certificatio	on Level Emission	n Standard	Tier
4,000 CO-US06 4,000 HC-NM+NOx	.02 US0 .2019		 _		-	.02		11.80 0.600	



9BMXT03.0M57

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048 Part 1 Issued: 08/01/08

Date: 01-AUG-08 CERTIFICATION AND FUEL ECONOMY INFORMATION SYSTEM (CFEIS) Time: 05:28:36 AM

SUMMARY SHEET DATABASE REPORT

EMISSION DATA VEHICLES

Model Year: 2009 Vehicle Manufacturer: 120 BMW Summary Sheet Version Number: 0 Engine Manufacturer: BMX BMW

Summary Sheet Index Number: 120T2-20 Certificate Number: Test Group: 9BMXT03.0M57 Vehicle Sales Area: CA CALIFORNIA

FA FEDERAL ALL ALTITUDE Engine System:

Evaporative/Refueling Family:

Evaporative System:

Vehicle ID: LJ95006

Vehicle Configuration: 0

Transmission: 26 L6
Engine Code: 3.0-A-M57-E70
Axle Ratio: 3.64
N/V Ratio: 30

Carline Name: X5 XDRIVE35D
Fuel: CERT DIESEL (8 - 15 PPM SULFUR)
Displacement: 2993.0 CC
Rated HP: 265 N/V Ratio: 30

Compression Ratio: 16.5

High Altitude: Test Procedure Code: 95 SC03 Test Weight: 5500

Test Number: Running Change: 1088945 Fuel System: Test Sales Area: CALIFORNIA DIRECT FUEL INJECTION

Catalyst: OXYGEN CATALYST ONLY Turbo/Supercharger: TURBOCHARGER

Dynamometer Power A

Dynamometer Target Coefficients: a = 59.3 b = .33 c = .02413 b = -.048 c = .02677Dynamometer Set Coefficients: a = 26.5

Aged Emission Components: N/A

Exhaust Emission Related Components: 16 OXIDATION CATALYST OTHER ACTIVATED EGR

35 62 50 TURBOCHARGER ELECTRONIC CONTROLS-DIGITAL

99 OTHER

Exhaust Emission

Useful Life Emissions Result RAF Additive DF Multiplicative DF Certification Level Emission Standard Tier 4,000 CO-SC03 .023 .02 4.00 L2 .022 4,000 HC-NM+NOx SC0 .02 0.44 L2

Date: 01-AUG-08 CERTIFICATION AND FUEL ECONOMY INFORMATION SYSTEM (CFEIS)

Time: 05:28:36 AM SUMMARY SHEET DATABASE REPORT

EMISSION DATA VEHICLES

Model Year: 2009 Vehicle Manufacturer: 120 Summary Sheet Version Number: Engine Manufacturer: BMX BMW

120T2-20 Certificate Number: Summary Sheet Index Number:



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048 Part 1 Issued: 08/01/08

Test Group: 9BMXT03.0M57 Vehicle Sales Area: CA CALIFORNIA Engine System: FA FEDERAL ALL ALTITUDE Evaporative/Refueling Family: Evaporative System: Vehicle ID: LJ95006 Transmission: Vehicle Configuration: 0 Engine Code: 3.0-A-M57-E70 Carline Name: X5 XDRIVE35D Axle Ratio: 3.64 CERT DIESEL (8 - 15 PPM SULFUR) N/V Ratio: Fuel: 3.0 Compression Ratio: Displacement: 2993.0 CC 16.5 Rated HP: 265 High Altitude: Test Weight: 5500 Test Procedure Code: 2 CVS 75 AND LATER (W/O CAN. LOAD) Running Change: Test Number: 1088943 Fuel System: DIRECT FUEL INJECTION Test Sales Area: FEDERAL ALL ALTITUDE Catalyst: OXYGEN CATALYST ONLY Turbo/Supercharger: TURBOCHARGER Dynamometer Power A Dynamometer Target Coefficients: a = 59.3 b = .33c = .02413Dynamometer Set Coefficients: a = 26.5 b = -.048c = .02677Aged Emission Components: N/A Exhaust Emission Related Components: 16 OXIDATION CATALYST 35 OTHER ACTIVATED EGR TURBOCHARGER 50 62 ELECTRONIC CONTROLS-DIGITAL 99 OTHER Exhaust Emission Useful Life Emissions Result RAF Additive DF Multiplicative DF Certification Level Emission Standard Tier ______ ----120,000 CO .114 0 1.183 .13 50,000 CO .12 .114 0 1.073 3.40 B5 120,000 HC-NM .0159 0 1.26 .020 0.090 B5 50,000 HC-NM .01591 0 1.103 .0175 0.0750 B5 120,000 HC-NM+NOx COM .09 .09 1.41 B5 0 120,000 NOX .0286 1.11 .032 0.070 В5 50,000 NOX .0286 0 1.043 .030 0.050 B5 120,000 PM .0007 0 1 .001 0.010 B5 120,000 PM-COMP .00035 0 0.08 B5 * SFTP(Supplemental Federal Test Procedure) test numbers for the composite HC-NM+NOx and CO(optional) certificate levels: 1088946 (US06), 1088945 (SC03). Date: 01-AUG-08 CERTIFICATION AND FUEL ECONOMY INFORMATION SYSTEM (CFEIS) Time: 05:28:36 AM SUMMARY SHEET DATABASE REPORT EMISSION DATA VEHICLES Vehicle Manufacturer: 120 RMW Summary Sheet Version Number: Λ Engine Manufacturer: BMX RMW Summary Sheet Index Number: 120T2-20 Certificate Number: 9BMXT03.0M57 Vehicle Sales Area: Test Group: CA CALIFORNIA Engine System: FA FEDERAL ALL ALTITUDE Evaporative/Refueling Family: Evaporative System:

Vehicle ID: LJ95006 Transmission: 26 L6



9BMXT03.0M57

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Vehicle Configuration: 0 Engine Code: 3.0-A-M57-E70

Carline Name: X5 XDRIVE35D Axle Ratio: 3.64 Fuel: CERT DIESEL (8 - 15 PPM SULFUR) N/V Ratio: 3.0

Displacement: 2993.0 CC Compression Ratio: 16.5 Rated HP: High Altitude: Test Weight: 5500 Test Procedure Code: 2 CVS 75 AND LATER (W/O CAN. LOAD)

Running Change: Test Number: 1088943

Fuel System: DIRECT FUEL INJECTION Test Sales Area: FEDERAL ALL ALTITUDE

OXYGEN CATALYST ONLY Catalyst: Turbo/Supercharger: TURBOCHARGER Dynamometer Power A

Dynamometer Target Coefficients: a = 59.3 b = .33c = .02413Dynamometer Set Coefficients: a = 26.5 b = -.048c = .02677N/A

Exhaust Emission Related Components: 16 OXIDATION CATALYST 35 OTHER ACTIVATED EGR

50 TURBOCHARGER 62 ELECTRONIC CONTROLS-DIGITAL

OTHER

Date: 01-AUG-08 CERTIFICATION AND FUEL ECONOMY INFORMATION SYSTEM (CFEIS) Time: 05:28:36 AM SUMMARY SHEET DATABASE REPORT

EMISSION DATA VEHICLES

Model Year: 2009 Vehicle Manufacturer: 120 Summary Sheet Version Number: Engine Manufacturer: BMX BMW

120T2-20 Certificate Number: Summary Sheet Index Number: 9BMXT03.0M57 Vehicle Sales Area: CA CALIFORNIA Test Group:

Engine System: FA FEDERAL ALL ALTITUDE

Evaporative/Refueling Family:

Evaporative System:

Aged Emission Components:

Vehicle ID: LJ95006 Transmission: 26 L6

Engine Code: 3.0-A-M57-E70 Axle Ratio: 3.64 Vehicle Configuration: 0

Carline Name: X5 XDRIVE35D Axle Ratio: CERT DIESEL (8 - 15 PPM SULFUR) Fuel: N/V Ratio: 30 Displacement: 2993.0 CC Compression Ratio: 16.5

Rated HP: 265 High Altitude: Test Weight: 5500 Test Procedure Code: 3 HWFE (HIGHWAY TEST)

Running Change: Test Number: 1088944 Fuel System: DIRECT FUEL INJECTION Test Sales Area:

FEDERAL ALL ALTITUDE Catalyst: OXYGEN CATALYST ONLY Turbo/Supercharger: TURBOCHARGER



9BMXT03.0M57

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Dynamometer Power A

Dynamometer Target Coefficients: a = 59.3 b = .33 c = .02413 Dynamometer Set Coefficients: a = 26.5 b = -.048 c = .02677

Aged Emission Components: N/A

Exhaust Emission Related Components: 16 OXIDATION CATALYST 35
TURBOCHARGER 62

OTHER

OTHER ACTIVATED EGR ELECTRONIC CONTROLS-DIGITAL

Exhaust Emission

Useful Life	Emissions	Result	RAF	Additive DF	Multiplicative DF	Certification Level	Emission Standard	Tier
120,000 50,000	NOX-HWY NOX-HWY	.0016		0 0	1.11 1.043	.002	0.090 0.070	B5 B5

Date: 01-AUG-08 CERTIFICATION AND FUEL ECONOMY INFORMATION SYSTEM (CFEIS) Time: 05:28:36 AM SUMMARY SHEET

DATABASE REPORT

EMISSION DATA VEHICLES

Vehicle Manufacturer: 120 BMW Model Year: 2009 Summary Sheet Version Number:

Summary Sheet Index Number:

0 Engine Manufacture. 120T2-20 Certificate Number: 9BMXT03.0M57 Vehicle Sales Area: CA CALIFORNIA FA FEDERAL ALL ALTITUDE Test Group:

Engine System:

Evaporative/Refueling Family:

Evaporative System:

Transmission: 26 L6
Engine Code: 3.0-A-M57-E70
Axle Ratio: 3.64 Vehicle ID: LJ95006

Vehicle Configuration: 0

Carline Name: X5 XDRIVE35D
Fuel: CERT DIESEL (8 - 15 PPM SULFUR)
Displacement: 2993.0 CC
Rated HP: 265 N/V Ratio: 30 Compression Ratio: 16.5 Rated HP: High Altitude: 265 Test Weight: Test Procedure Code: 90 US06 Test Number: Running Change: 1088946

DIRECT FUEL INJECTION Fuel System: Test Sales Area: FEDERAL ALL ALTITUDE OXYGEN CATALYST ONLY Turbo/Supercharger: TURBOCHARGER

Catalyst: Dynamometer Power A

Dynamometer Target Coefficients: a=59.3 b=.33 c=.02413 Dynamometer Set Coefficients: a=26.5 b=-.048 c=.02677

Aged Emission Components: N/A

Exhaust Emission Related Components: 16 OXIDATION CATALYST 35 OTHER ACTIVATED EGR

50 TURBOCHARGER ELECTRONIC CONTROLS-DIGITAL

99 OTHER



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Exhaust Emission

Useful Life	Emissions	Result	RAF	Additive DF	Multiplicative DF	Certification Level	Emission Standard	Tier
4,000	CO-US06 CO-US06 HC-NM+NOx US0	.02 .02 .2019		0	1.183	.02 .02 .202	19.30 11.80 0.600	B5 B5 B5

Date: 01-AUG-08 CERTIFICATION AND FUEL ECONOMY INFORMATION SYSTEM (CFEIS)
Time: 05:28:36 AM SUMMARY SHEET
DATABASE REPORT

EMISSION DATA VEHICLES

Model Year: 2009 Vehicle Manufacturer: 120 BMW Summary Sheet Version Number: 0 Engine Manufacturer: BMX BMW Summary Sheet Index Number: 120T2-20 Certificate Number:

Test Group: 9BMXT03.0M57 Vehicle Sales Area: CA CALIFORNIA

Test Group: 9BMXT03.0M5/ Venicle Sales Area: CA CALIFORNIA
Engine System: 1 FA FEDERAL ALL ALTITUDE

Evaporative/Refueling Family:

Evaporative System:

Vehicle ID:LJ95006Transmission:26L6Vehicle Configuration:0Engine Code:3.0-A-M57-E70

Vehicle Configuration: 0 Engine Code: 3.0-A-M5/-E/0 Carline Name: X5 XDRIVE35D Axle Ratio: 3.64
Fuel: CERT DIESEL (8 - 15 PPM SULFUR) N/V Ratio: 30

Tact: Compression Ratio: 16.5

Rated HP: 265 High Altitude:

Test Weight: 5500 Test Procedure Code: 95 SC03

Running Change: Test Number: 1088945

Fuel System: DIRECT FUEL INJECTION Test Sales Area: FEDERAL ALL ALTITUDE Catalyst: OXYGEN CATALYST ONLY Turbo/Supercharger: TURBOCHARGER

Dynamometer Power A

Dynamometer Target Coefficients: a = 59.3 b = .33 c = .02413
Dynamometer Set Coefficients: a = 26.5 b = -.048 c = .02677
Aged Emission Components: N/A

Exhaust Emission Related Components: 16 OXIDATION CATALYST 35 OTHER ACTIVATED EGR

50 TURBOCHARGER 62 ELECTRONIC CONTROLS-DIGITAL

99 OTHER

Exhaust Emission

Useful Life Emi	issions	Result	RAF	Additive DF	Multiplicative DF	Certification Level	Emission Standard	Tier
120,000 CO-	-SC03	.023		0	1.183	.03	6.40	B5
4,000 CO-	-SC03	.023				.02	4.00	B5
4,000 HC-	-NM+NOx SC0	.022				.02	0.44	B5



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048 Part 1 Issued: 08/01/08

Date: 01-AUG-08 CERTIFICATION AND FUEL ECONOMY INFORMATION SYSTEM (CFEIS)
Time: 05:28:36 AM SUMMARY SHEET

SUMMARY SHEET DATABASE REPORT

VEHICLES COVERED BY CERTIFICATE

Summary Sheet Version Number: 0 Vehicle Manufacturer: 120 BMW Summary Sheet Index Number: 120T2-20 Engine Manufacturer: BMX BMW

Test Group: 9BMXT03.0M57 Engine System: 1

Evaporative/Refueling Family: Evaporative System:

Division Carline Sales Area Code and Description

BMW 87 X5 XDRIVE35D CA CALIFORNIA

BMW 87 X5 XDRIVE35D FA FEDERAL ALL ALTITUDE



Section

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OBD System Description 9.

Refer to Common Section for Model Year 2009, Section 16.

Section 11 Page 1 of 1

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11. AECD descriptions

			Con	trollec	l Parame	eters	
AECD	Sensed Parameters	EGR	DPF Re- generation	SCR	Injection Timing	Injection Quantity	ldle Speed
X01	Air Flow	X	X	X	X	X	
T01	Engine Coolant Temperature	X	X	X	X	X	X
S01	Engine Speed	X	X	X	X	X	
T02	Intake Air Temperature	X	X		X	X	
T03	Charge Air Cooler Temperature Downstream	X					
T04	Ambient Air Temperature	X		X			
X02	Ambient Pressure	x	X	X	X	X	X
X03	Boost Pressure	X	X	X			
X04	DPF Differential Pressure		X				
X05	Fuel Pressure		X	X			
X06	Gear Information	-	X	X	X	X	
X07	Exhaust Gas Pressure	X					
T05	Exhaust Gas Temperature DOC Upstream		X	X	X	X	
T06	Exhaust Gas Temperature DPF Upstream		X	X	X	X	
T07	Exhaust Gas Temperature SCR Upstream	X		X			
T08	Temperature EGR Cooler Downstream	X					
P01	EGR Valve Position	X					
X08	NOx Concentration SCR Upstream	-		X			
X09	NOx Concentration SCR Downstream			X	A		
T09	Urea Tank Temperature			X			
X10	Urea Pump Pressure			X			
S02	Vehicle Speed		X		X	X	

For description and rationale of the respective AECD, refer to Common Section, Section 11.



Section 12 Page 1 of 2

12.	12. Description of vehicles and test parameters covered by certificate					
12.1.	Vehicle Parameters					
12.1.1.	Carline	087				
12.1.2.	Model Name	X5 xDrive35d				
12.1.3.	Vehicle classification	Special Purpose Vehicle - S.U.V 4WD				
12.1.4.	Emission control system description:					
12.1.4.1	Catalyst, Diesel Particulate Filter					
	Туре:	Oxidation-Catalyst, Particulate filter				
	configuration:	exhaust branch, with 1 catalyst [OC] and integrated particulate filter [DPF]				
12.1.4.2	2. Selective Catalytic Reduction:	urea injection, 1 catalyst underfloor [SCR]				
12.1.4.3	3. EGR type	High-pressure and low-pressure				
12.1.4.4	4. Air pump type	n.a.				
12.1.4.5	5. Fuel system type	Direct Fuel Injection				
12.1.4.6	6. Intake air aspiration method	2 Turbochargers				
12.1.4.7	7. Other	Charged Air Cooler				
12.1.5.	Engine Code Automatic transmission:	3.0-A-M57-E70				
12.1.6.	Number of valves per cylinder	4				
12.1.7.	Engine displacement	2993 cm³				



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12.1.8. Sales area FA, CA

12.1.9. Transmission and overdrive Lock-up / Automatic / 6-speed

12.1.10. Shift Indicator Light Not equipped

12.1.11. Tire size 255/55 R18

12.1.12. N/V-Ratio

automatic transmission: 29.98

12.1.13. Weights [lb.]

Automatic Transmission	Curb Weight [lb.]	Gross Weight [lb.]	Equivalent Test Weight [lb.]
X5 xDrive35d	5226	6615	5500

12.1.14. Fuel tank volume [1] 85.0

12.2. Test Parameters

12.2.1. Engine Starting Procedures Refer to Common Section, Section 12

12.2.2. Shift Schedules Refer to Common Section, Section 12

12.2.3. Dynamometer loading Information

12.2.3.1. Sort of dynamometer Single roll

12.2.3.2. Electric Dynamometer Target Coefficients:

Target Coefficients Automatic Transmission	A [lb _f]:	B [lb _f /mph]:	C [lb _f /mph ²]:
X5 xDrive35d	59.3	0.330	0.02413

12.2.3.3. Electric Dynamometer Set Coefficients:

Set Coefficients Automatic Transmission	A [lb _f]:	B [lb _f /mph]:	C [lb _f /mph ²]:
X5 xDrive35d	26.5	-0.048	0.02677

12.2.4. Evaporative testing parameters n.a.



9BMXT03.0M57

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14. Request for certification

We herewith apply for the Federal Certificate of conformity and the ARB Executive Order for the Test Group 9BMXT03.0M57.

Pending the confirmatory test data for this test group we respectfully apply for a conditional certificate according to §86.1835-01 (d).

The mentioned Test Group complies with all applicable regulations contained in 40 Code of Federal Regulations Part 86 and the California Code of Regulations.

> Mayeur_ Horst Wagener



9BMXT03.0M57

Section 15 Page 1 of 2

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15. Other information

15.1. Label according to 40 CFR § 86.1807-01 and according to California Motor Vehicle Emission Control Label Specifications

DRAFT - Inverted Representation

	ische Motoren	Werke AG OL INFORMATIO	INC
Conforms to regulation		2009 MY	ЛV
U.S. EPA: T2B5 LDT		Fuel: Diesel	
California: LEV II LDT	OBD: II	Fuel: Diesel	
No adjustments needed.	DI,2TC,CAC,EGR	,SCR,DPF,OC,2NOS,A	FS
Group: 9BMXT03.0M57		7 812 056	

Original representation:

Base: Black Characters: Silver



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15

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15.2. **HCHO** -Statement

Based on our engineering evaluation of appropriate HCHO emissions we state, that all lightduty vehicles included in the respective applications comply with the applicable HCHO emission standards.

According to 40 CFR §86.1829-01 (E) we waive the data submittal on the basis of this statement.



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17. California ARB Information

17.1.	Statements	
17.1.1.	Driveability	
17.1.2.	Label Durability	
17.1.3.	Fill Pipe	
17.1.4.	Production Vehicles versus Test Vehicles	Refer to Common Section, Section 17
17.1.5.	Continuity of Emissions	
17.1.6.	I/M Test Procedure Statement	
17.1.7.	Warranty	
17.1.8.	High Altitude Requirements	
17.2.	Fill Pipe Specification	n.a.
17.3.	Projected Sales	Confidential Information: Refer to Common Section, Section 16
17.4.	Evaporative Emission Deterioration	n.a.



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048 Part 1 Issued: 08/01/08

17.5. Supplemental Data Sheets

17.5.1. Common

Manufacturer BMW

Vehicle Model(s) X5 xDrive35d
Test Group 9BMXT03.0M57

Evaporative Family n.a.

Engine Type: 4-cycle, In-Line 6-cylinder

Liters (CID) 3.0 I (182.6 cu.in.)

Drive System Front engine, four-wheel drive

17.5.2. Abbreviations

17.5.2.1. Injection System

ECM Engine Control Module

17.5.2.2. Exhaust Emission Control System

OC Diesel oxidation catalyst EGR exhaust gas recirculation

SCR Selective Catalytic Reduction

DPF Diesel particulate filter2NOS 2 heated NOx-SensorsAFS Air Fuel Ratio Sensor

17.5.2.3. Special Features

OBD II On Board Diagnostics II

17.5.2.4. Fuel System

DI Direct Injection

2TC Two TurbochargersCAC Charged Air Cooler



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7 804 112

7 807 928

7 807 927

7 808 020

Part 1 Issued: 08/01/08 048 2009 Air Resources Board Supplemental Data Sheet Passenger Cars, Light Duty Truck 17.5.3. and Medium Duty Vehicles: 17.5.3.1 X5 xDrive35d Manufacturer:BMWTest Group:9BMXT03.0M57Evap. Fam.:n.a. All Eng Codes in Test Group: CA ____ 49S ____ 50S __X _AB965 ____ ORVR __YES ____ NO __X Exhaust Std.: CA Tier-1 _____ TLEV ____ LEV ____ LEV II _X ZEV ____ USEPA NLEV ____ n.a. Useful Life with R/L In-Use Exh. Std.: Full In Use X Alt In Use LEV II Evap Veh. Class: PC ___ LDT1 ___ LDT2 ___ MDV1 ___ MDV2 ___ MDV3 _X MDV4 ___ MDV5 ___ Single Cert. Std. for Multi-Class Test Group: N/A Fuel Type(s): Dedicated ____ Flex-Fuel ____ Dual Fuel ____ Bi-Fuel ____ Gasoline ____ Diesel __X_ CNG _____ LNG ____ LPG ____ M85 ____ Other (specify) ___ Emission Test Fuel(s): Indo ____ CBG ___ CNG ___ LPG ___ M85 ___ Other (specify) ____ Diesel: 13 CCR 2282 X 40 CFR 86.113-90 40 CFR 86.113-94 Evaporative Test Procedure: California Federal Std. AMA _____ Mod AMA ____ Mfr ADP ____ Other (specify) _SRC Service Accum.: NMOG Test Procedure: N/A Std Equiv X R/L Test Proc.: SHED Pt Source 3.0 Liters 182.6 Cubic Inches In-Line 6 Displacement Engine Configuration: Valves per Cylinder 4 Rated HP 265 @ 4200 RPM Engine: Front X Mid Rear Drive: FWD RWD 4WD-FT X 4WD-PT **Exhaust ECS:** DI, 2TC, CAC, EGR, SCR, DPF, OC, 2NOS, AFS **Engine Code** Vehicle Trans. **ETW** Injection EGR Catalytic NOx (ECM/PCM) Reduction Models Type (lbs.) System Converter / Part No.* Part No. Soot Filter Catalyst Part No.* Part No.* Cal. ID 1 Cal. ID 2 HP-FGR-Valve: 7 807 805 HP-EGR-Cooler: 7 812 513

S6

5500

8 508 137

8 506 134

LP-EGR-Valve:

LP-EGR-Cooler:

3.0-A-M57-E70 X5 xDrive35d

^{*} Initial part numbers only, for update refer to Part 2 of application



9BMXT03.0M57

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17.5.4	l.	2009 Model Y Passenger C						
17.5.4	l.1	X5 xDrive35d						
Manuf	acturer:	BMW Test	Group:	9BMXT0	3.0M57	Evap. F	am.:	n.a.
All En	g Codes i	n Test Group:	CA	49S	50S	X AB965	ORVR	YES NO X
Exhau	st Std.:	CA Tier-1	TLEV	LEV	<u></u>	LEV II X	ZEV	USEPA NLEV
		· · · · · · · · · · · · · · · · · · ·				·		X Alt In Use
Veh. C	lass: PO	CLDT1	LDT2	MDV	′1 N	MDV2	MDV3 X M	DV4 MDV5
Single	Cert. Std	. for Multi-Class	Test Group:	N/A				
Fuel T	ype(s):	Dedicated	Flex-Fuel	Dua	al Fuel	Bi-Fuel	Gasolin	e DieselX
		CNG LN	IG	LPG	M85	0	ther (specify)	
Emiss		Fuel(s): Indo	<u> </u>	· · · · · · · · · · · · · · · · · · ·		<u> </u>	-	
		Diesel: 13 CCR 2						
Evapo		st Procedure: (
					_	ADP	Other (spec	ify) SRC
								Pt Source
								Cubic Inches
		nder 4 F						Ouble mones
					_			T X 4WD-PT
		DI, 2TC, CAC,					<u> </u>	1 / 400-11
								
	uthorized Ruel Specific	Representative		CS: 1 CS: 17.1.8	22		rease in Emission s all Requirement	
	est Equipm			CS:17.1.10) 23	Driveability S	s all Requirement Statement	CS:17.1.1
4 T	est Procedu	ure		CS: 16.4 dyno	24	Adjustable P	Statement arameters	none
		umulation Route		dyno	25	Tamper Res	stance Method(s)	n.a.
		inty Statement	,	CS: 17.1.11 CS: 17.1.11	2 26	Fill Pipe Spe	cifications Compliance	n.a.
	miss.Label.	Req'd/Recm'd	•	55. 17.1.11 15	.3 21 28	ORD Sys inc	l.Marked Revisior	CS: 17.1.7 ns CS: 16
	vap. Contro			n.a.	28 29		cedure & Data	17.1.6
	ngine Para	•		7	30	50 Degree F		n.a.
	uel System			3	31	Manufacture	r's RAF	n.a.
	gnition Syste			N/A	32		ned: ORVR Cert	
		itrol Systems	4\	N/A CS: 16			Misfire Monitoring	
	rojected Sa /ehicle Desc	iles (LDT/MDV Spli	ι)	6			lonitoring - 1.5 x S ce-Based Leak Cl	
		Test Procedure		n.a.		MDV VEC		n.a.
	•	Press Profiles		n.a	33		Average Calculat	
	DV Selection			CS: 2	34		ts/Withdrawals	n.a.
-		me as Test Veh.St.		17.1.4	35	EPA Certifica		not yet
20 E	:miss. Labe	Durability St.		17.1.2	36	Equiv NiviOG	ProcARB Appr	oval yes RefNo.: C-94-05
04 -	F(\)/ !!!	latara e	Durability		Emission D		Emission Data	Emission Data
		Information	Data Vehicle		Vehicle		Vehicle	Vehicle
	C/O or C/A							
	MY & ID	Paga(a)	2009, L012;		2009, LJ			
	Vehicle Log Zero Mile Bo	Page(s) ook Page(s)	Section 6	<u> </u>	Section			
		& Engr. Eval.	N/A		N/A			



9BMXT03.0M57

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048 Part 1 Issued: 08/01/08

17.5.5. 2009 Model Year Certification Review Sheet Passenger Cars, Light Duty Truck and Medium Duty Vehicles

17.5.5.1 X5 xDrive35d

Manufacturer: BMW

Test Group: 9BMXT03.0M57
Evaporative Family: n.a.

Emission Data Vehicle ID Engine Code & Displ. ETW DPA Test Loc. Trans MPG City [lb.] [hp] Hwy LJ95006 (Conf. 00) BMW 3.0-A-M57-E70, 2993 ccm S6 5500 23.4 35.6

Projected Emissions (1)

(grams/mile)

Test Fuel: Diesel	OMNMHCE _X_NMHC NMOG	СО	NOx	PM	Hwy NOx	CO ₂			
						City 9BMX10000062 *	HWY 9BMX10000063 *	SC03 9BMX10000064 *	US06 9BMX10000065*
1. LJ95006 4K						435.1	286.4	486.3	419.5
50K		0.1	0.03		0.00	N/A	N/A	N/A	N/A
120k	0.020	0.1	0.03	0.00	0.00	N/A	N/A	N/A	N/A
(1) The EDV above comply with the									
standards of (@ 50K):	0.075	3.4	0.05	0.01	0.07	N/A	N/A	N/A	N/A
standards of (@ 120K):	0.090	4.2	0.07	0.01	0.09				
and includes deterioration									
factors of (@ 50 K):	1.103	1.073	1.043	1.000	1.043	N/A	N/A	N/A	N/A
factors of (@ 120 K):	1.260	1.183	1.110	1.000	1.110				

^{*} test number

Application			
Processed by:	Date:	Reviewed by:	Date:

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048 Part 2 Issued: 04/10/10

Application for Certification

Model Year: 2009

Durability Group: 9BMXDPDNNV30

Evaporative Family: n.a.

Test Group: 9BMXT03.0M57

Summary Sheet No: 120T2-20

Durability Group Description: Four Stroke,

Diesel Cycle,

Direct Fuel Injection, Catalyst Code 6Lh,

Ceramic Monolith Pt/Pd Oxidation-Catalyst,

Diesel Particulate Filter, Exhaust Gas Recirculation, Selective Catalytic Reduction

Test Group Description: 3.0 Liter, In-Line 6 Cylinder, LDT 4

Applicable Standards: CARB: MDV-3, LEV II

EPA: Tier 2 Bin 5

Carlines Covered: X5 xDrive35d

Exhaust:

Vehicles Tested: VID Config. Test TN

LJ95006

00 HWY 9BMX10000063 00 US06 9BMX10000065

00

00 SC03 9BMX10000064

9BMX10000062

FTP 75



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O48 Part 2 Issued: 04/10/10

Section	Contents	Reference, Applicability
1	Part numbers	
2	Calibration Information	
3	Emission related warranty parts	s list



Section Page 1 of 2

1

048 Issued: 04/10/10 Part 2

1. **Part Numbers**

Engine control module

Model	Cal-Id. 1	Cal-Id. 2
	8 506 137	8 506 141*
X5 xDrive35d	8 506 414	8 508 709
	8 506 415	8 510 070

Transmission control module

Model	Cal-Id. 1	Cal-Id. 2
	7 591 972	7 593 815
X5 xDrive35d	7 591 972	7 598 439
	7 605 219	7 607 053

^{*} Since SOP



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Thermostat	7 805 811
EGR valve (high pressure)	7 807 805
EGR valve (low pressure)	7 807 928
Throttle body	7 804 384
EGR cooler (high pressure)	7 812 513
EGR cooler (low pressure)	7 807 927
Electric pneumatic pressure	7 811 814
converter	
Glow plug	7 807 277
High pressure pump	7 804 409
Fuel injector	7 808 089
Common rail pressure sensor	7 787 167
Coolant temperature sensor	1 433 076
Boost pressure sensor	7 792 260
Crankshaft position sensor	7 787 192
·	
Charge air temperature sensor	7 812 741
Fuel temperature/- pressure sensor	7 799 965
Fuel temperature/- pressure sensor Fuel tank	7 799 965 7 207 418
·	
Fuel tank Filler Cap Fuel Pump	7 207 418
Fuel tank Filler Cap Fuel Pump Nox sensor upstream	7 207 418 7 238 871 7 164 359 7 812 530
Fuel tank Filler Cap Fuel Pump Nox sensor upstream Nox sensor downstream	7 207 418 7 238 871 7 164 359 7 812 530 7 812 528, 8 509 719
Fuel tank Filler Cap Fuel Pump Nox sensor upstream Nox sensor downstream Heated oxygen sensor	7 207 418 7 238 871 7 164 359 7 812 530 7 812 528, 8 509 719 7 801 158
Fuel tank Filler Cap Fuel Pump Nox sensor upstream Nox sensor downstream Heated oxygen sensor Exhaust gas pressure sensor	7 207 418 7 238 871 7 164 359 7 812 530 7 812 528, 8 509 719 7 801 158 7 808 013
Fuel tank Filler Cap Fuel Pump Nox sensor upstream Nox sensor downstream Heated oxygen sensor Exhaust gas pressure sensor Exhaust gas temperature sensor	7 207 418 7 238 871 7 164 359 7 812 530 7 812 528, 8 509 719 7 801 158 7 808 013 7 805 606
Fuel tank Filler Cap Fuel Pump Nox sensor upstream Nox sensor downstream Heated oxygen sensor Exhaust gas pressure sensor Exhaust gas temperature sensor HP EGR temperature sensor	7 207 418 7 238 871 7 164 359 7 812 530 7 812 528, 8 509 719 7 801 158 7 808 013 7 805 606 8 506 995
Fuel tank Filler Cap Fuel Pump Nox sensor upstream Nox sensor downstream Heated oxygen sensor Exhaust gas pressure sensor Exhaust gas temperature sensor HP EGR temperature sensor LP EGR temperature sensor	7 207 418 7 238 871 7 164 359 7 812 530 7 812 528, 8 509 719 7 801 158 7 808 013 7 805 606 8 506 995 7 811 913
Fuel tank Filler Cap Fuel Pump Nox sensor upstream Nox sensor downstream Heated oxygen sensor Exhaust gas pressure sensor Exhaust gas temperature sensor HP EGR temperature sensor LP EGR temperature sensor mass air flow sensor	7 207 418 7 238 871 7 164 359 7 812 530 7 812 528, 8 509 719 7 801 158 7 808 013 7 805 606 8 506 995 7 811 913 7 805 415
Fuel tank Filler Cap Fuel Pump Nox sensor upstream Nox sensor downstream Heated oxygen sensor Exhaust gas pressure sensor Exhaust gas temperature sensor HP EGR temperature sensor LP EGR temperature sensor mass air flow sensor Intercooler	7 207 418 7 238 871 7 164 359 7 812 530 7 812 528, 8 509 719 7 801 158 7 808 013 7 805 606 8 506 995 7 811 913 7 805 415 7 805 150
Fuel tank Filler Cap Fuel Pump Nox sensor upstream Nox sensor downstream Heated oxygen sensor Exhaust gas pressure sensor Exhaust gas temperature sensor HP EGR temperature sensor LP EGR temperature sensor mass air flow sensor	7 207 418 7 238 871 7 164 359 7 812 530 7 812 528, 8 509 719 7 801 158 7 808 013 7 805 606 8 506 995 7 811 913 7 805 415
Fuel tank Filler Cap Fuel Pump Nox sensor upstream Nox sensor downstream Heated oxygen sensor Exhaust gas pressure sensor Exhaust gas temperature sensor HP EGR temperature sensor LP EGR temperature sensor mass air flow sensor Intercooler SCR metering module	7 207 418 7 238 871 7 164 359 7 812 530 7 812 528, 8 509 719 7 801 158 7 808 013 7 805 606 8 506 995 7 811 913 7 805 415 7 805 150 7 807 206
Fuel tank Filler Cap Fuel Pump Nox sensor upstream Nox sensor downstream Heated oxygen sensor Exhaust gas pressure sensor Exhaust gas temperature sensor HP EGR temperature sensor LP EGR temperature sensor mass air flow sensor Intercooler SCR metering module SCR mixer SCR catalyst SCR active tank	7 207 418 7 238 871 7 164 359 7 812 530 7 812 528, 8 509 719 7 801 158 7 808 013 7 805 606 8 506 995 7 811 913 7 805 415 7 805 150 7 807 206 7 808 017
Fuel tank Filler Cap Fuel Pump Nox sensor upstream Nox sensor downstream Heated oxygen sensor Exhaust gas pressure sensor Exhaust gas temperature sensor HP EGR temperature sensor LP EGR temperature sensor mass air flow sensor Intercooler SCR metering module SCR mixer SCR catalyst	7 207 418 7 238 871 7 164 359 7 812 530 7 812 528, 8 509 719 7 801 158 7 808 013 7 805 606 8 506 995 7 811 913 7 805 415 7 805 150 7 807 206 7 808 017 7 808 020



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2. Calibration information

2.1 Fuel system

Emission Component	Parameter	Calibration information
Fuel pump	fuel flow	230 l/h
Fuel pressure regulator	fuel pressure	72,5 ± 1,5psi

2.2. EGR System

controlled by ECU

2.4. Miscellaneous

Emission Component	Parameter	Calibration information	
oxygen sensor (heated Y)	Lambda = (eng A/F)/(stoich A/F)	Lambda	Output (mA)
	min	0.90	-0.50
	max	1.18	0.33
Thermostat	Coolant flow: starts to open fully open by	88 °C ± 2°C 100°C ± 2°C	



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Issued: 04/10/10 048 Part 2

3. **Emissions Related Parts List**

LIST OF HIGH PRICE (OVER \$530) EMISSIONS PARTS Labor rate 148,32 per hour (including threshold parts over \$430)

Part Labor Total Part Number Part Name Hours Cost Cost 11 12 7 796 378 CYLINDER HEAD COVER GASKET \$38,06 \$761,12 4,88 11 51 7 805 811 THERMOSTAT \$43,65 4,00 \$636,93 11 61 7 800 585 INTAKE MANIFOLD W/ FLAP CONTROL \$594,33 2,88 \$1.020,75 11 62 7 796 266 EXHAUST MANIFOLD \$500,00 10,25 \$2.020,28 11 62 7 799 728 EXHAUST MANIFOLD GASKET 10,25 \$1.536,79 \$16,51 11 65 7 802 587 TURBOCHARGER (SMALL/TOP) \$936,62 15,50 \$3.235,58 11 65 7 802 588 TURBOCHARGER (LARGER/BOTTOM) \$1.632,38 15,50 \$3.931,34 CONNECTION PIPE (TEE FOR COMPRESSOR 11 65 7 802 590 \$281,32 2,00 \$577,96 **OUTLETS)** CONNECTION PIPE (COMPRESSOR-TO-\$281,32 2,00 11 65 7 802 591 \$577,96 COMPRESSOR) CONNECTION PIPE (TEE FOR COMPRESSOR 11 65 7 802 592 \$562,62 2,00 \$859,26 OUTLETS) 11 65 7 802 593 GASKET, TURBO TO EXHAUST MANIFOLD \$20,00 15,50 \$2,318,96 11 65 7 802 594 GASKET, TURBO TO EXHAUST MANIFOLD \$20,00 15,50 \$2.318,96 11 65 7 807 542 GASKET, TURBO TO EXHAUST MANIFOLD 15,50 \$2.318,96 \$20,00 11 66 7 791 232 VACUUM PUMP \$403,46 1,75 \$663,02 11 71 7 790 065 EXHAUST COOLER FOR EGR \$444,07 3,38 \$944,65 11 71 7 804 384 THROTTLE BODY \$393,30 1,13 \$560,16 13 51 7 807 288 HIGH PRESSURE PUMP \$1.240.94 5,63 \$2.075,24 13 53 7 792 718 HIGH PRESSURE PIPE (ACCUMULATOR-TO-INJECTOR) \$21,75 7,13 \$1.078,53 13 53 7 799 869 OVERFLOW OIL LINE (INJECTOR LEAKAGE LINE?) \$139,23 2,75 \$547,11 13 53 7 805 727 PRESSURE ACCUMULATOR (FUEL RAIL) \$570.68 1.00 \$719.00 13 53 7 805 734 FUEL PRESSURE REGULATING VALVE \$253,67 2.38 \$605,93 13 53 7 808 094 FUEL INJECTOR \$419,79 2,88 \$846,21 13 61 7 810 980 ENGINE CONTROL UNIT (BASIC DME) \$1.118,24 2,63 \$1.507,58 16 11 4 422 731 DELIVERY UNIT W/ IN-TANK FUEL PUMP \$281,37 2,63 \$670,71 16 14 7 195 471 DELIVERY UNIT W/ IN-TANK FUEL PUMP \$281,37 2,63 \$670,71 17 51 7 809 321 CHARGE AIR COOLER \$369,08 1,50 \$591,56 18 30 7 796 215 DIESEL PARTICULATE FILTER 4,63 \$3.120,17 \$2.434,19 18 30 7 807 474 DIESEL PARTICULATE FILTER \$2.434,19 4,63 \$3.120,17 24 34 7 571 246 TRANSMISSION CONTROL MODULE 3,00 \$3.223,04 \$2.778,08 24 40 7 567 816 TORQUE CONVERTER 10,25 \$4.298,36 \$2.778,08 24 40 7 585 539 TORQUE CONVERTER 10,25 \$3.279,26 \$1.758,98



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048	Part 2	Issued: 04/10/10
0.0	. 4	100000

threshold parts:

11 61 7 799 873	CHARGE AIR DUCT (CONNECTION PIPE-TO-CHARGE AIR COOLER)	\$231,98	2,00	\$528,62
11 61 7 810 307	CHARGE AIR DUCT (CHARGE AIR COOLER-TO-INTAKE MANIFOLD)	\$231,98	2,00	\$528,62
13 62 7 805 415	MASS AIR FLOW SENSOR	\$394,60	0,50	\$468,76
13 32 7 811 226	FUEL FILTER W/ HEATER	\$214,39	1,63	\$455,41
11 65 7 808 032	PRESSURE CONVERTER, TURBO VACUUM CONTROL	\$125,25	2,13	\$440,43
11 65 7 811 814	PRESSURE CONVERTER. TURBO VACUUM CONTROL	\$125.25	2.13	\$440.43



Notification of Running Change according to 40 CFR §86.1844-01 (f)

Manufacturer Running Change No.: Test Group: BMW 9 - 048- 01 9BMXT03.0M57 Issued: 04/10/10 Page: 1 of: 2

0. Common

Manufacturer: **BMW**

Test Group: 9BMXT03.0M57

Running Change No.: **9 - 048 - 01**

1. Description of Change

Change of ECU data level Change of Cal-ld 1, 2

Model	Cal-ld 1	Cal-ld 2
VE vDrivo2Ed	8 506 414	8 508 709
X5 xDrive35d	8 506 415	8 510 070*

Change of TCU data level Change of Cal-Id 1, 2

Model	Cal-Id. 1	Cal-ld. 2
X5 xDrive35d	7 591 972	7 598 439
	7 605 219	7 607 053°

Change of downstream NOx sensor 7 812 528 to 8 509 719.

2. Reason of Change

ECU Optimizing of oilservice intervals

ECU* Bugfix engine roughness

TCU Improvement of shifting comfort at lower speed

TCU* Improvement of shifting comfort NOx Sensor: Integrated CVN-module added

3. Portion of Product Line affected by the change

All models

4. Effect of change on emissions

none.



Notification of Running Change according to 40 CFR §86.1844-01 (f)

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5. Test data to demonstrate compliance with applicable emission standards n.a.

6. Summary report of all running changes incorporated since certification

Running change no	Dated	Product application	Change
9-048-01	11/04/10	03/01/09	Change of ECU data level
		09/01/09* 03/01/09	Change of TCU data level
		09/01/09*	G
		03/01/09	NOx Sensor change